

SCIENTIFIC INVESTIGATION OF BASS STRAIT— A BRIEF HISTORY

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This brief discussion of the history of investigations into Bass Strait can hardly provide more than a gloss to the Bibliography (p. 79) which Jeanette Hope, Ian Norman and I have prepared for this seminar. With Bass Strait we are, I believe, fortunate to have a fairly strictly finite region in which the impact of man's hand, and the effect of man's ideas, can be traced with perhaps unusual definition. I can think of few areas of Bass Strait studies in which the historian and the scientist have not much to offer each other. Thus this bibliography, unusually wide-ranging in its subject headings, is intended, at least in part, as a specific encouragement to interdisciplinary studies. Dr Norman and I wish to record our appreciation of the work of Dr Hope in the preparation of this Bibliography for publication.

Both pure and applied science entered the Bass Strait story from the inception. The practical uses of finding a waterway where none was known are clear. David Collins (1802: 193) described how the saving of a matter of four degrees of latitude in voyages to Port Jackson was but part of the matter: more importantly, the dreaded north-east winds that ships met rounding Cape Pillar were avoided, a week or more could be saved on the passage and, as Collins says, 'the wear and tear of a ship for one week, are objects to most owners, more especially when freighted with convicts by the run'.

The British ships engaged with China found the newly-discovered straits provided them with a welcome alternative to crossing the Indian Ocean on an oblique course, and running the risk of capture by the French squadrons cruising there with malice aforethought (Scott, 1910: 21). Geoffrey Blainey (1966: 81) puts the matter succinctly: 'The home government in 1803 thought the strait was so vital that they had ordered three bases to be made—on the north shore, the south shore, and on King Island . . . Bass Strait seemed so important that it justified an increase in Australian settlements from two to five'.

The practical issues, then, are not in dispute. Perhaps more encouraging were the other motives of the men who discovered Bass Strait. What sent George Bass down into the Strait in that wonderful whale-boat voyage to Westernport which Flinders (1814: cxx) said 'has not perhaps its equal in the annals of maritime history', and what sent both Bass and Flinders back again soon after in the *Norfolk*, was surely not merely problems of navigational convenience, national security, or commercial profit, and not even the orders of Governor Hunter, but an instinct for knowledge which I take it lies at the root of most of our concerns. As Ernest Giles, a later casting from the same mould as Flinders, once said: 'An explorer is an explorer from love, and it is nature, not art that makes him so' (1889: 342).

But, whatever his personal mettle, Flinders was, like Cook (and from whom, through William Bligh, he was in direct line of succession) a master scientist; inventor, as we know, not only of devices such as the Flinders Bar, but above all, through his intellectual brilliance and the almost inhuman perseverance which we are assured goes with such brilliance to denote genius, able to gather, interpret and act on the phenomena with which he came into contact in a profoundly scientific manner. It may be of interest to note here Flinders' view of the importance of 'nautical astronomy'. In a splendid obituary of his cat Trim which I recently came across, Flinders refers to Trim's pleasure in chasing a ball backwards and forwards across the forecabin of the *Investigator*,

his admiration of the planetary system having induced an habitual passion for every thing round that was in motion. Could Trim have had the benefit of an Orrery, or even of being present at Mr Walker's experiments in natural philosophy, there can be no doubt as to the progress he would have made in the sublimest of sciences. (1809: fol. 3.)

While talking of Flinders it is well to remember the many hydrographers of talent who worked in Bass Strait during the nineteenth century. As inter-

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colonial and overseas trade developed strongly in the 1830's and 1840's, we find J. Lort Stokes and his officers and men of the *Beagle* surveying the Straits between 1839 and 1843, nearly coming to grief in Murray Pass in the Kent Group, and eventually producing Admiralty charts which, as 1695A and 1695B, remain the only set that covers the whole Strait (Lort Stokes, 1846). Although they have, of course, been updated in some respects, they are still on issue under Lort Stokes's name.

The extraordinary development of shipping into Port Phillip after the discovery of gold led to many disasters and near-disasters which not only spurred the building of major lighthouses (though this had already commenced in the 1840's) but led to a succession of increasingly sophisticated surveys of Bass Strait waters, those of H. L. Cox, H. J. Stanley and R. F. Hoskyn being especially noteworthy (Ingleton, 1944: 84 ff.). Nor, too, should we forget the pioneer land surveyors of Bass Strait, such as G. W. Barnard (1826) in the 1820's, and John W. Brown (1887a, 1887b) in the 1880's.

At this point I think we should stop and ask ourselves what the state of organised science was in Australia prior to, say, 1850. Many of the earlier officer class, the kind of men who came out with Governor Phillip, were of course, as gentlemen of the Enlightenment, wedded to the genteel exercise of their talents for observation and note-taking, sketching and commenting on the phenomena of nature. But, as we read in the journal of Phillip's voyage out here,

something more essential than beauty of appearance, and more necessary than philosophical riches, must be sought in a place where the permanent residence of multitudes is to be established ([Phillip], 1789: 52).

An ill-fated Philosophical Society was founded in Sydney in 1821; more importantly, the Mechanics' Institute movement, in which applied science was supposed to have a large role to play, was launched in Australia in Hobart Town in 1827. But, of course, there were no universities until 1854, to sponsor or direct research, and, although the Australian Museum in Sydney was in fact founded in 1830, for the first twenty years it did not even have a roof to call its own. Without institutes or centres of some kind, dedicated to systematic teaching, collecting and research, 'science' is of course mere dilettantism; it is for the 'dabbler' as Lady Franklin very honestly called herself at the time she built her lovely little museum in Hobart in 1842 (Fitzpatrick, 1949: 195). W. C. Wentworth (1820: 320-330) had called for the establishment of an agricultural

college, and not a few could, like Archibald Michie (1844), issue a call for serious attention to a planned assault on the physical problems of Australian life, but even such an admirable institution as the Tasmanian Society of Natural History was powerless to proceed beyond polite evenings at Government House where professional gentlemen read their papers on such topics as the blood globules of the platypus (Fitzpatrick, 1949: 198).

It is, however, to this Society that we owe one of the earliest, if not the earliest, scientific paper on a Bass Strait topic: the surgeon and naturalist Joseph Milligan's paper on the 'Shock of an earthquake at Flinders' Island', published in the *Tasmanian Journal of Natural Science* in 1844. (And talking of earthquakes, can some geologist explain to me the 'Cape Barren guns', the noises like booms of distant cannon, which were reported in the 1890's as a common phenomenon in the Furneaux Group? (Gabriel, 1894: 175)). Nor should we forget the early work, at this period and among the Bass Strait islands, of John Gould, not only for his own sake, as a dedicated professional, but because he seems to have set a fashion. According to my own rough census, the 120-odd scientifically-based ornithological papers that have been published about Bass Strait are not that far short of outnumbering those of all other disciplines combined!

The spirit of organised science was not abroad in our land until the 1850's at the earliest, with the establishment of the first two universities, the founding of important museums and, above all, the emigration around the time of the gold-rushes of men who were not only serious amateur scientists—we had had plenty of them before—but were prepared to work collectively and systematically to bring science into a meaningful relationship to public life. In Victoria we think of men like Andrew Clarke and William Blandowski, of Frederick McCoy and of the Rev. Dr. John Bleasdale. Men such as these founded the National Museum, supported the Technological Commission which was set up in 1869, and were behind the schools of mines which were established from 1871.

These were, as I have said, emigrants who gave their minds to the service of their new country. Of necessity they were cadres: by no means were they always field-workers themselves, but they prepared the path for the field-workers.

Of course there had been field-workers in Bass Strait from the very beginning: nearly half a century before even John Gould, the great Brown, '*Botanicorum facile Princeps*', was sailing these waters with Flinders, stuffing his vasculum with plants from the Kent Group, and preparing for

the disappointment of the publication of his *Prodromus* . . . But, essentially, the field workers were to come when the institutions that could train them and support them were effectively established; when the increasing ease and optimism of life could release the time and talents of the many rather than the few; and when it became possible for a significant, even if small, minority to view 'themselves as Australian, with an Australian orientation to the visual images of their own land, to the nuances of its culture, and to the relationships of its living things.

What I am now saying, of course, is two things: that the amateur has been important, and remains so, in science as in history, in Bass Strait as elsewhere; and that something interesting and important happened about 1880—not only in art and literature, as has often been pointed out, and perhaps even in politics, but especially and essentially in a fundamental commitment to the Australian environment. It was in the 1880's, and also in the 1890's, that some of the most significant field naturalists', ornithological and similar societies were founded throughout Australia. And not only were they founded, but often they flourished more strongly in their first twenty years than they have done since—or such, at least, and pending further research, is my impression. No doubt it was in part a romantic revolt against vulgar materialism and urban squalor, but it was a healthy and necessary one. I see this period, then from 1880 up to 1900, with a carry-over until the first world war, as the essential period of Australian liberalism at its best, working out its social and environmental relations on the basis of its own, indigenous, premises; democratic, because not self-consciously differential, and less concerned than we are with the niceties of the amateur and professional, the academic and the other: less concerned with knowledge capitalism, in fact. It was a hopeful phenomenon, out of which much promise emerged, but it was still-born.

The figures, though based on my very subjective statistical analysis, are, I think, interesting. Before 1870, one is tempted to say before 1880, one can identify hardly more than ten scholarly contributions of any kind to Bass Strait studies. Between 1870 and 1890 we jump to twenty-one such contributions, spread well out over the field, predominantly in the areas of 'natural history' and 'fish'. From 1890 to 1910 we jump to 57 scientific papers, twenty being on birds and twelve, the next highest number, on 'natural history'. It seems more than likely that the great bulk of these fifty-seven papers are the contributions of the amateur

natural historians, often in many ways more interesting, less consciously erudite, and better written than most things scientists can, or are allowed to, write today.

After 1910, however, a variation in the pattern emerges. It is not, of course, unexpected, but it is interesting to see it appear. Suddenly, there are no more papers that can be loosely labelled 'natural history' at all, and even the number of ornithological papers drops sharply. 'Natural history' as a category hardly appears again until after 1950. We have reached, instead, the age of the differentiated specialist and the entry of bureaucracy. The big spurt is in papers on mammals and invertebrates, the latter, like the fishing reports, reflecting in large part the activities of the *Endeavour* researches: researches which, for all their patchiness, remain the only co-ordinated, long-term scientific research programme Bass Strait has seen, with the exception of the recent attentions the oil prospectors have paid the area.

Between 1930 and 1950 interest in the Bass Strait region drops right away, and no doubt the war had something to do with this. In the previous twenty years I have identified seventy-two research papers; between 1930 and 1950 only fifty-eight appeared. Most of these were in the area of minerals (excluding oil and gas), but in this period there was clearly a revival of interest in the historical and contemporary anthropology of Bass Strait.

In the twenty years after 1950 there was, of course, a great increase in the number of papers, largely but not entirely reflecting the expansion of academic and CSIRO interests in the area. Compared with the fifty-eight papers published in the twenty years before 1951, the succeeding twenty years have turned up 175 papers; and of these the largest collection, seventy in fact, are bird studies of one kind and other. Here some papers, for instance those on the Cape Barron goose, reflect a developing environmental concern; and the studies on the mutton-bird, also handsomely represented, an economic and social, as well as a strictly scientific, interest.

In this last twenty years twenty-one papers have been published in the mineral field (and I exclude oil and gas from this), while mammals, invertebrates and fish recover strongly from the neglect of the previous twenty years, with thirteen papers in each category. In agriculture there appears to have been no serious work done in Bass Strait whatsoever before the Depression; six published papers, and no doubt many unpublished governmental reports, testify, *inter alia*, to the insensate determination of the authorities in recent years to expand land settlement on some of the islands,

regardless of the mis-use of public funds which has, at times, reached the proportions of a major scandal. One curious and unexpected phenomenon which may be observed in the last twenty years is that virtually nothing serious has been published on the Cape Barren Islanders, past or present, with the exception of the papers of Tindale and Miss Howeler. It can only be assumed that they have slipped even further into the Great White Australian memory-hole than the mainland Aborigines have.

In these attempts at quantificationism which I have put in to satisfy the scientific mind, I have skipped too rapidly over some points I should have taken up in more detail. (And, incidentally, I should have liked to talk about the non-scientific books and articles on Bass Strait which are prominent in our bibliography, and often closely related to scientific interests, but these are outside my brief.)

I should, in talking of the distinguished contribution made to Bass Strait studies in earlier days by the amateur naturalists, have remarked especially on the series of expeditions which commenced in November 1887 with the pioneering trip of the Field Naturalists' Club of Victoria to King Island, under the leadership of A. J. Campbell (Campbell, 1888). It is interesting to reflect, when we think of King Island so soon afterwards being put to the torch in the interests of the land speculators, that Baldwin Spencer, a distinguished member of this early expedition, could write of it as being one of the 'wild uncivilised spots' (1888: 13). Latter-day scientists and field naturalists may also care to reflect on the fact that the government of Victoria lent the F.N.C.V. the steamer *Lady Loch* in order that they might make this excursion (*Argus*, 23 December 1893). The engineer E. D. Atkinson (1890: 156-164) explored, during 1889, other islands in the western group; while in November 1890 a party, led by D. Le Souef, spent eleven days in the Kent Group (1891: 121-131). In 1893 J. Gabriel led a party to the Furneaux Group, where they spent an entertaining and instructive period (1894: 167-184). Fifteen years later Melbourne business and professional men were in the habit of chartering steamers to introduce them, in an educative and responsible way, to the charms and the interests of the islands (e.g. Barrett, 1918: 119 ff.). And then it all stopped.

Realising, as we now do, the tenuousness of the environmental position on and around the islands, the fragility of their ecosystems, I suppose none

of us would want to encourage gadabouting, or should one say 'runabouting'. Yet it is strange how Australians have resolutely turned their backs on the maritime environment which in many ways is so much part of their history, and which in this case, as Professor Warren has pointed out (1969: 109), lies so close to major centres of population.

I should also like to mention briefly, and in the historical context, the 'beach population' of the islands of Bass Strait to which I have already referred in passing: the descendants of the sealers who, in the nineteenth century, built up what appeared to be a relatively strong economic and social group. I refer to this in my present context because, as a scholar has recently demonstrated most interestingly in the *Papers and Proceedings of the Tasmanian Historical Research Association* (Ryan, 1972), historians and others in the nineteenth century used the Bass Strait community as raw material for much quasi-anthropological and quasi-genetic theorising, and this material in itself is now a part of our intellectual history and of joint concern both to the historian of ideas and the social scientist.

There remains a great deal more of mutual interest to the historian and the scientist in the story of Bass Strait. One very attractive subject on which they could collaborate would be, for instance, the development of the Bass Strait fishing industry, such as it is. Why is it possible, for instance, for James Barrett (1918: 148) to say in 1910 that there is no marine biologist in Victoria, that 'our fisheries have never been considered from the scientific standpoint', and that 'and accurate and scientific knowledge of the life and habits of fish' is the 'first requisite', and for Alister Gilmour (1969: 68) to write sixty years later that, 'with respect to fisheries at least', Bass Strait 'is unknown at this stage and cannot be known until detailed studies are carried out in the region'. The study of the historical relationship of man and fish in Bass Strait would surely be of great scientific, as well as social and historical, interest.

In the history of Bass Strait investigations as, I suspect, in other studies of Australian science, we can perhaps very broadly distinguish the period before, say, 1914 as the age of the amateur, and the period since 1914 as the age of the specialist. This still begs a lot of questions. One of these questions would involve the changing role of the amateur, and his relationship to the specialist. Another, perhaps closely linked, would involve the relationship between science as knowledge-seeking,

science as profit-seeking for the private corporations, and science as status-seeking for the government and semi-government corporations. Clearly one of the interesting issues which emerges from this little study, as it would emerge from much more ambitious ones of virtually any area one chose to take, is that the scientist may increasingly be forced to work against his own interests, assuming those interests, in the broadest sense, to be knowledge-based and conservation-oriented. The scientist whose work has been underwriting the exploration of Bass Strait minerals, or assisting in land settlement there, may be seen to be acting against a rational future in terms of resource allocation for the nation or the world, although it may seem hard to blame him as an individual for this.

Of course there has also been an increase of knowledge-based, as well as profit-based and status-based, science in Bass Strait, though it is not always easy to separate these three motives which may sometimes be involved in the one investigation. University-type investigations in Bass Strait, for instance, basically 'knowledge-based', are also clearly linked to the status race in higher education, both as it affects individuals and as it affects institutions.

Perhaps the major criticism of the present position of knowledge-based scientific investigation in Bass Strait that we may make is that it remains poorly co-ordinated, in two important ways. In the first place, the often distinguished contributions of individual workers are carried out randomly, as regards problems, and episodically, as regards long-term linkages. (Dom. Serventy's work, of course, is a notable exception to this latter criticism.) For much of this we can blame the poor showing of the universities in their attention to local problems; and of CSIRO also, though they perhaps have a better excuse. The absence of funds is—as anyone who knows the universities will realise—only a part of the matter.

The second major criticism is that the scientists, despite the fact that only a handful are yet involved in Bass Strait, share the common fault of their breed in being more interested in their own specialisms than in the corollary of those specialisms: the need to ensure, by working through their colleagues, the community and through politics, that their specialisms' habitats survive. I shall go no further here than to remark that it does indeed seem extraordinary that a start has not yet been made with major biological surveys and censuses of Bass Strait based on inter-institutional and inter-disciplinary teams, and utilising if necessary fishing boats, aircraft and portable laboratories. I am aware of the fact that

individual organisations are often hard pressed. I am aware of the unfortunate fact that the region is divided between two States, one of which almost ignored it until money came flowing from its sands, and the other of which has regarded and regards it as little more than a nuisance. But I am also aware of the fact that a multiplicity of institutions—the Australian Conservation Foundation, the universities, CSIRO, the Royal Society, museums, private companies, government departments and so on—are, at least in principle, interested. What is lacking is a catalyst, and it is the absence of that catalyst that I feel regrettable, and avoidable.

Until, then, some such development takes place, we must see Bass Strait science as still caught in its 'middle' period: beyond amateurism, but still well short of true professionalism. Perhaps this Symposium, and perhaps even the Bibliography which is a part of it, will assist the process. And the end of the process I hope will be, and I take it most of us here at this meeting hope will be, the preservation of Bass Strait and its islands as an area of priceless significance for all time. Bass Strait has the capacity to become one of the world's notable 'protected' areas, and it is quite within our powers today to ensure its survival for future Australians as a place of unlimited personal and intellectual renewal.

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